Operations Report

Masa Tanaka

8-January-2004

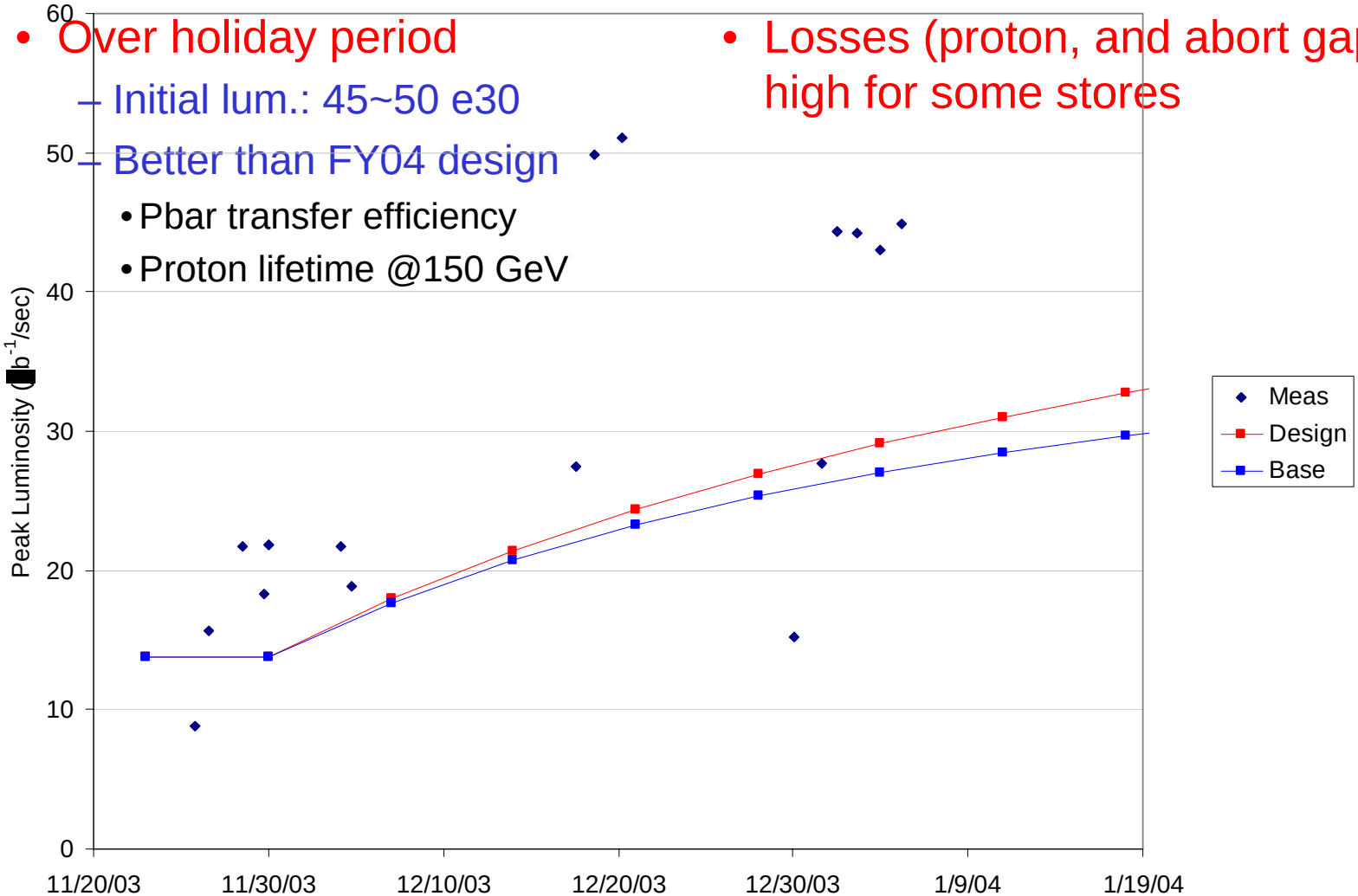
CDF Weekly Meeting

This Week's Stores

Date	#	Inst Lum (initial)	Int Lum (delivered)	Lum to tape (ε)	Si Phys Lum (ε)
12/31	3118	15.3e30	364	333 (92%)	0 (0%)
12/31	3120	28.1e30	955	673 (71%)	613 (64%)
1/1	3122	46.0e30	1595	1063 (67%)	1005 (63%)
1 / 2	3123	45.7e30	2057	1647 (82%)	1630 (79%)
1 / 3	3125	44.6e30	2017	1649 (79%)	1289 (64%)
1 / 5	3127	46.8e30	2183	1822 (84%)	1738(80%)
1 / 6	3130	49.2e30	2483	1985 (80%)	1749 (70%)
1 / 8	3132	50.6e30	ongoing		
Total			12.1 pb^{-1}	9.4 pb^{-1} (76%)	8.0 pb^{-1} (66%)

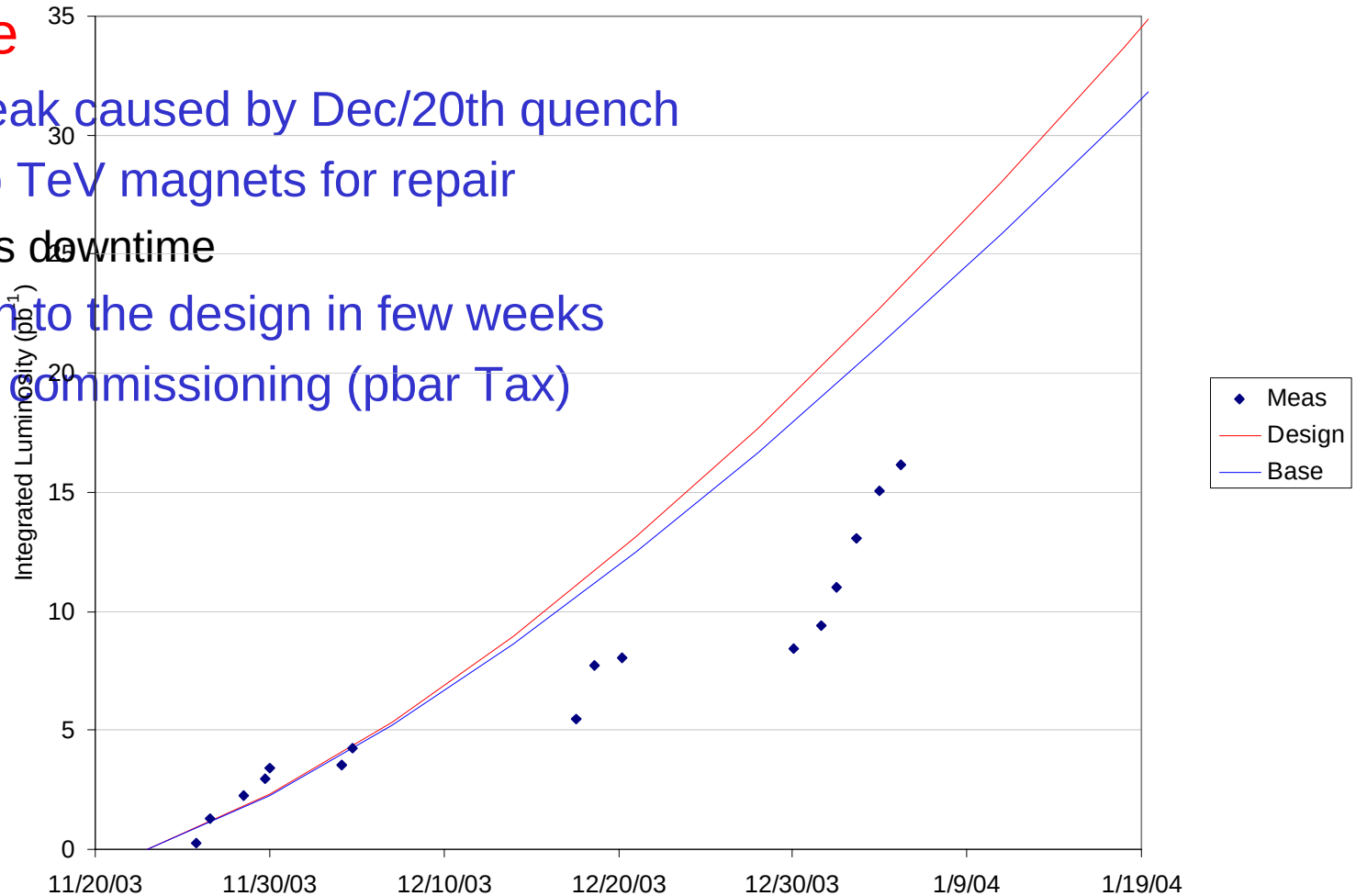
Accelerator Performance

- Over holiday period
  - Initial lum.: 45~50 e30
  - Better than FY04 design
    - Pbar transfer efficiency
    - Proton lifetime @150 GeV
- Losses (proton, and abort gap) are high for some stores



Integrated luminosity

- Down time
  - Helium leak caused by Dec/20th quench
  - Warm up TeV magnets for repair
    - 10 day's downtime
  - Will reach to the design in few weeks
  - Recycler commissioning (pbar Tax)

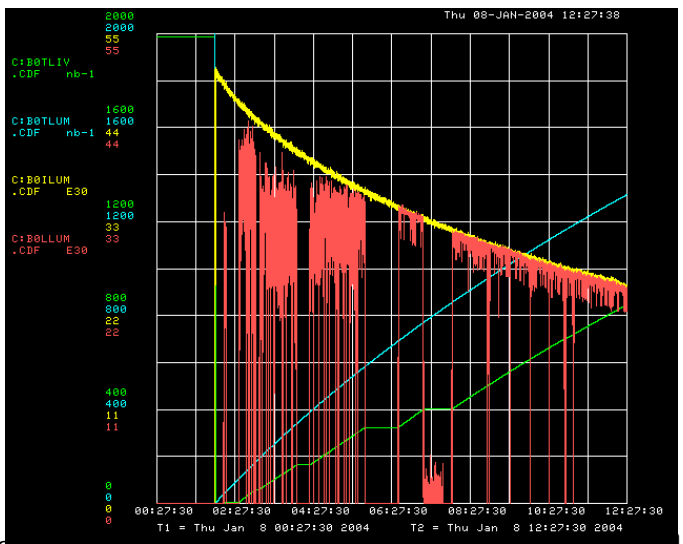


Detector Operation

- We would like to thank all of you who worked hard over the holiday period
- From Mary:
  - Masato Aoki and Ryo Tsuchiya filled in for eve and owl CO shifts which
  - had been cancelled. Yukihiro Kato, the day SciCo, also covered the CO job for his shift
  - Bruce Knuteson covered 2 ACE owl shifts including New Year's Eve.
  - Dervin Allen, Greg Feild, Steve Tether, Tom Wright, and Bill Badgett were in on New Year's Day working to to fix an evb problem that prevented us from taking data.
- From Kaori:
  - Morris Binkley for coming in to turn up COT HV for each store (and fixing other problems while he was there)
  - Stan Forrester for coming in to integrate silicon for each store
  - the ACEs and SciCos who worked over the holidays (and provided food)

Detector operation

- Detector is basically working stably
- Typically :1~2 hour downtime per store from several components
  - Tevatron losses
  - L3/evb
  - plug HV
  - SRC hung up



- DAQ deadtime:
  - Current default trigger table gives ~40% DAQ dead time at L=50e30
  - Level 3 processing time
    - L2 Accept rate limit : ~ 280 Hz
    - Trigger table: ~370 Hz
  - We were able to run <10% before shutdown with similar trigger table and L3 CPU power
  - Lower COT threshold: more occupancy
  - Beamline is centered: more SVT track
  - ~x2? L3 processing time per events?

Summary/Plan

- Tevatron
  - Running stably with initial luminosity ~50e30
  - 10 day downtime over Xmas week
  - Proton losses, and losses abort gap
- CDF
  - Detector is running stably
  - Major source of downtime
    - DAQ deadtime at the high luminosity